

THE NAVAL SAFETY CENTER'S AVIATION MAGAZINE

approach

December 1997



Surviving a High-Speed Ejection

Snagging a 250-Pound Piece of Spaghetti

A-6 Fire on the Flight Deck

Stages in Your Career

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Volume 42, Number 7

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On the cover: CH-46 heads out.

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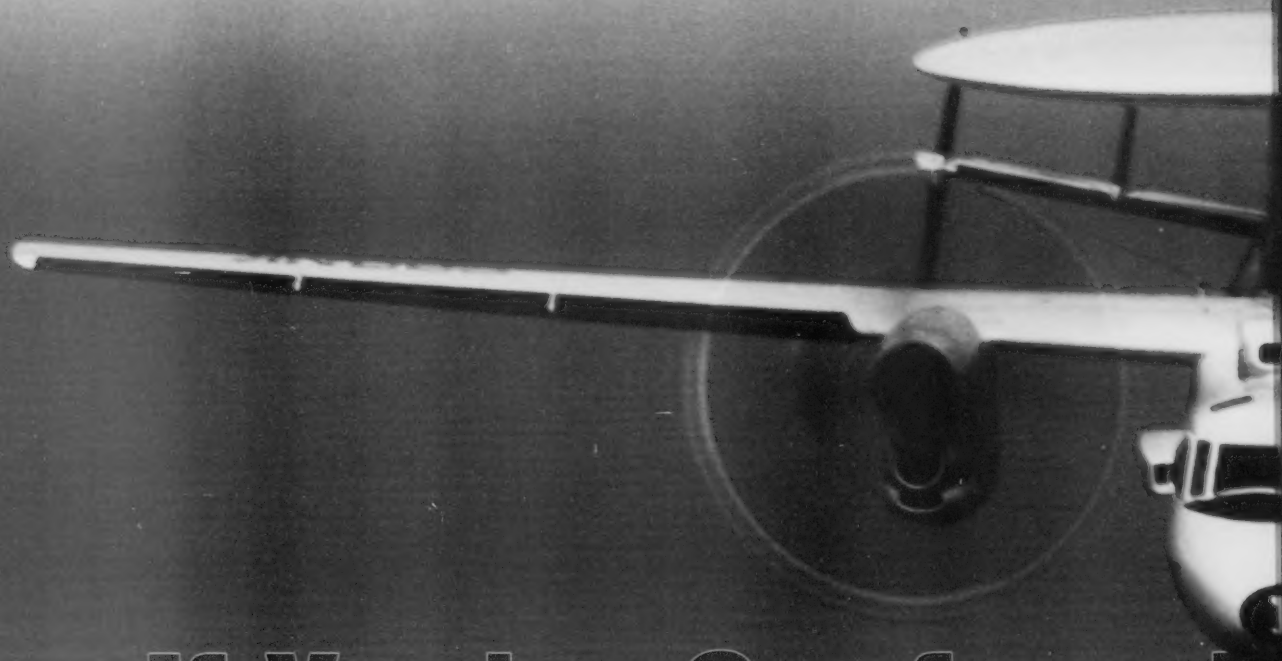
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If You're Confused,

E-2 CREW MEMBERS must never forget that we directly affect the well-being of other aircraft.

Even though system faults, controller errors, and poor communication may not put our own aircraft in harm's way, the aircraft we control may be placed in jeopardy. During EMCON approaches and Hummer-controlled approaches (HCAs), the E-2 is directly

responsible for recovering the entire air wing on board a CV, and the potential for catastrophe is great.

An incident occurred in our squadron during COMPTUEX/ITA that demonstrated how factors such as insufficient aircrew training and poor communication can quickly lead to a dangerous situation.

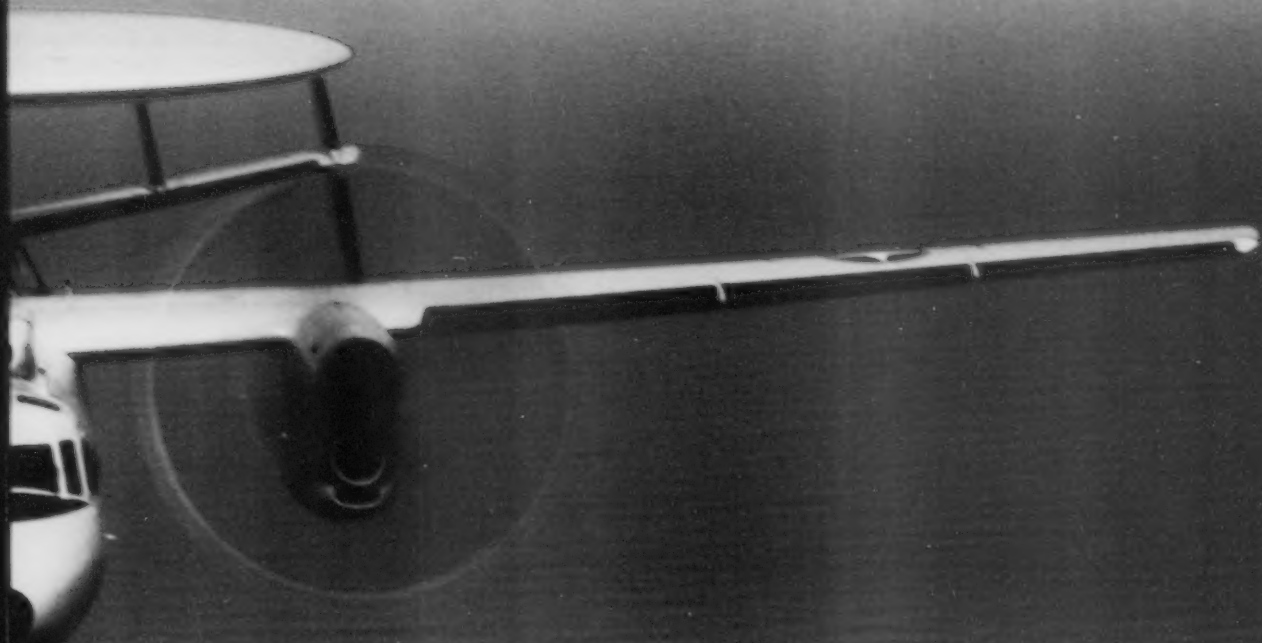
Our air wing had not practiced any EMCON or HCA recoveries since the previous deployment. At the beginning of the COMPTUEX/ITA, our CO told us we would practice these recoveries during the exercise.

The week after the announcement, our squadron had a single training session where a senior pilot quickly went over the procedures for Case I, II and III EMCON recoveries. He compared and contrasted EMCON recoveries and HCAs, emphasizing that while EMCON recoveries are done for a tactical purpose, HCAs are meant to simulate a CATCC failure.

Three weeks into the exercise, a crew briefed a night AEW mission. There had been no EMCON-HCA recoveries, and



CW02 Toriy Alleyne



They're Confused

by Lt. Steve Yodowitz

the crew did not expect to do that mission. The CICO and CAPC, both with more than 1,000 hours in type, had participated in EMCON-HCA approaches, but in other squadrons several years before. The copilot, RO and ACO had never seen these procedures and knew only what they had seen in the brief and read in the air wing TACPROS.

Since the possibility of doing these procedures did not seem imminent, they were not briefed. The aircrew launched for a double-cycle hop.

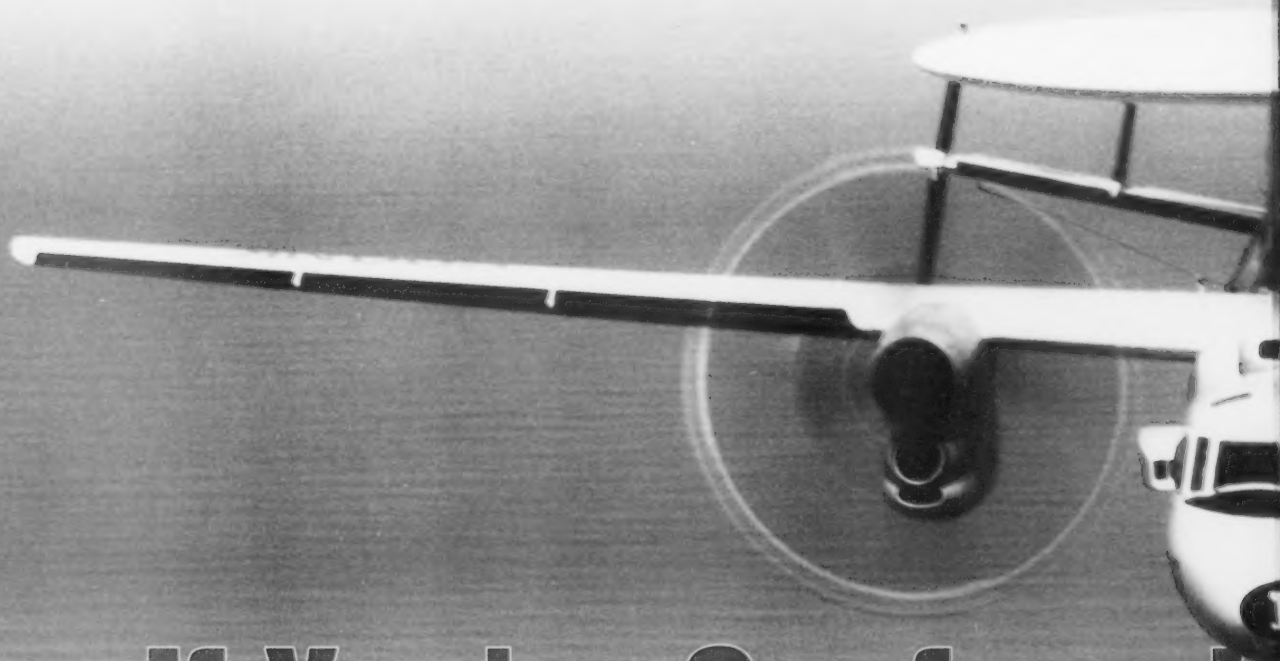
Halfway through the second cycle, CV Strike asked the E-2 to do an "EMCON HCA." This confused the E-2 crew because EMCON and HCA are two different sets of procedures, and it was unclear what Strike meant. When the CICO called Strike to clarify the issue, Strike would not give a definite answer as to which of the two approaches they wanted. The crew spent 20 minutes waiting for the CV to make up its mind. Finally, the CICO, noting that all the ship's radio frequencies were still active, decided to do a CASE II HCA. The ACO was

Hummer Strike; the pilot and copilot were Hummer Marshal. The CICO, Hummer Approach, and the RO assisted the CICO and helped track the aircraft. Again, these duties had not been briefed before the flight.

As the crew tried controlling the approach, more problems developed. The CICO and CAPC did not get along and bickered throughout the entire flight, which was very distracting to the junior members of the crew. The situation became worse when the CAPC calculated approach times that overlapped the next launch and did not provide the proper interval for the recovering aircraft. Unfortunately, all the aircraft had received wrong approach times on Hummer marshal before the CICO and CAPC corrected the error.

Marshal passed new push times, but the pilots in the recovering aircraft had to be confused. The CICO and the CAPC continued to argue and eventually stopped speaking to each other. Eventually, the RO and copilot had to bypass the two senior crew members and relay information between the CIC and the cockpit.

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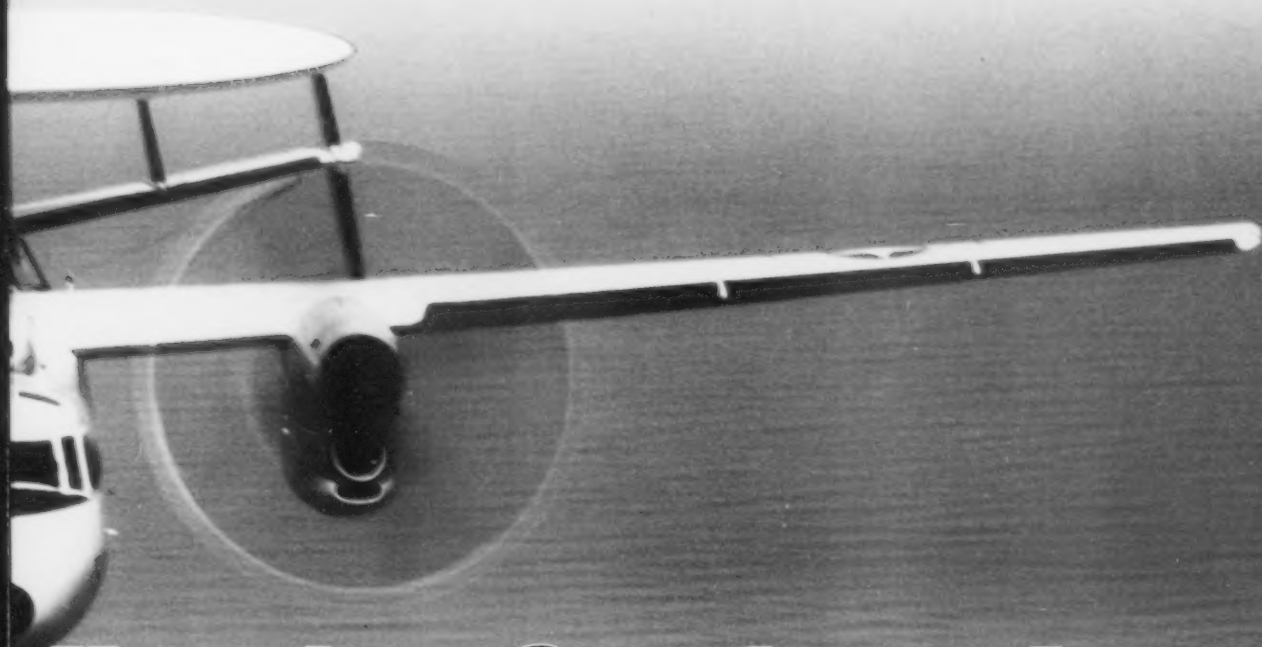
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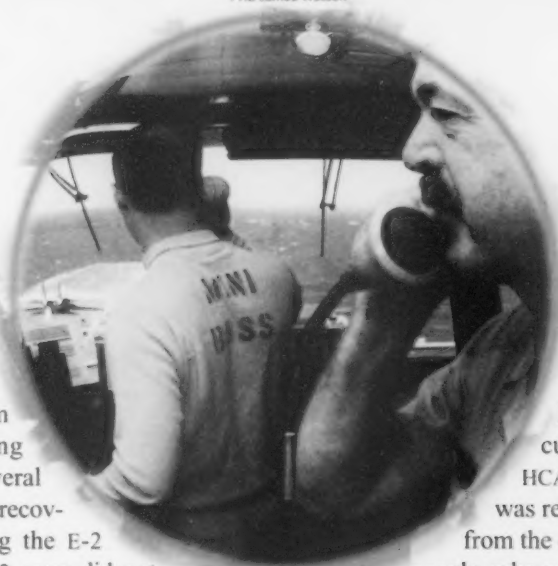
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As if the situation was not bad enough, the CV made the problem worse by changing tacan channels several minutes before the recovery, without telling the E-2 right away. The E-2 crew did not get the new channel from CV Strike until the approach was about to begin.

The E-2 passed the new channel to all the aircraft, but once again, people were confused. All the aircrew in the recovery caught on to the change except for one FA-18 pilot, who had the old tacan channel dialed in – a channel now being used by another ship in the battle group. The RO was having problems tracking the FA-18 and, in fact, allowed it to proceed more than 100 nm away from the CV during the recovery before the CICO finally realized something was wrong. The final result of these compounded errors was that the Hornet recovered 30 minutes late and very close to bingo.


The air wing was lucky not to lose an aircraft that night. The combination of crew inexperience, poor crew coordination, and poor coordination between the CV and the E-2 created a hazardous situation.

What could have been done better?

First, the air wing needs to stress the importance of keeping aircrew current in EMCON and HCA procedures. There was really no passdown from the cruise-experienced people, who were the last ones,

within recent memory, to make these recoveries. Because of its critical role in the process, the E-2 squadron must take the lead on training both its own people and, if necessary, the other squadrons on how to do these approaches.

The E-2 squadron must also meet with Strike and CATCC representatives beforehand to determine exactly what is expected to happen in these approaches. Requests like the one for an "EMCON HCA" do not make sense and create confusion. Also, the air wing should not be expected to do an impromptu EMCON or HCA without at least one rehearsed recovery.

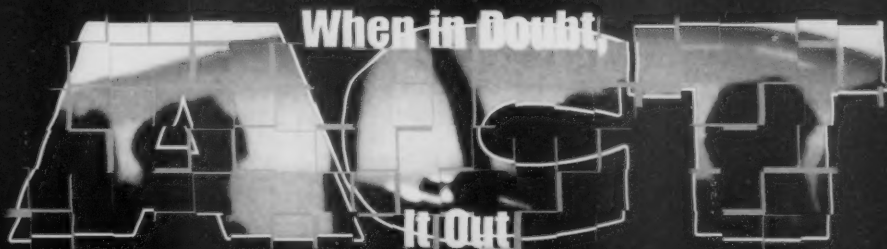
Finally, E-2 crew coordination between the front and back end is critical for these recoveries. The CICO and CAPC cannot afford to let personal differences get in the way. Recovering aircraft on board a carrier at night is hard enough without the completely artificial – and preventable – obstacles this E-2 crew encountered. 

Lt. Yodowitz flies with VAW-116.

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LESSONS LEARNED

There are two ways to get smart. One is through experience – we call this “the hard way.” The other is to learn through others’ experiences. The second method is much easier on our machines and bodies.



by LCdr. Lynn Tawney

Picture a two-place fighter in section on a low-level attack. Suddenly, the pilot hears two muffled sounds like pops or thumps from the rear of the aircraft. Seconds later, he sees a master caution light with a right bleed-air warning. He calls, “Knock-it-off,” pulls the right-engine throttle to idle, and climbs.

His backseater reaches for his pocket checklist. A few seconds later, an engine-fire light illuminates. The pilot radios his wingman, “I’ve got an engine fire on the left side.” He pushes the right engine-fire light to secure fuel to that engine and pulls the left throttle to cut-off.

They lose both engines at low altitude and eject. They’re OK, but the aircraft is lost. Total time from knock-it-off to first swing in the chute is 1 minute 40 seconds. Several factors contributed to this mishap.

Material Failure. A support rod for the No. 2 engine had failed, allowing high-temperature bleed air into the engine bay.

Inadequate Aircrew Training. The pilot had a preconceived notion that a fire-warning light was a dangerous threat that warranted immediate action. This mindset contributed to a hasty decision-making process that ultimately led to human error.

Poor Aircrew Coordination Training (ACT). The aircrew failed to coordinate effectively. They didn’t ask for or offer help. They didn’t fully

analyze the situation and take proper action. They didn’t help each other with appropriate voice calls, such as “I have a right engine-fire light,” or “Confirm left engine is off.”

The wingman should have visually checked the mishap aircraft and reported what he saw, such as whether there was fire or smoke. Following the pilot’s transmission about a fire, the wingman should have reported that he didn’t see any secondary indications. The wingman remained more than 3,000 feet away and made no radio calls until the start of the rescue.

Lessons Learned:

1. Emergency procedures need to be thorough and correct instead of hurried. Few emergencies are immediately catastrophic. If you rush, you may trade accuracy for speed, increasing the chance for error.
2. Emergencies can contribute to mission-task overload. Effective ACT – within your aircraft and between you and your wingman – reduces task overload and helps ensure a proper course of action.
3. Ask your fellow crew members what voice calls they could make to improve your situational awareness during an emergency. Precise and direct communications are as vital during an emergency as they are in a successful air-to-air engagement.

LCdr. Tawney is an FA-18 analyst in the Aircraft Operations Division, Naval Safety Center.

NATOPS says that the entry into an inverted spin will be slow and deliberate... but that's not the way this one happened.

Inverted

by Lt. Billie G. Dunlap

"Knock it off! Knock it off!"

"Lock your harness!"

I HAD HEARD AND USED both those phrases before, but never so close together as the day my pilot and I got ourselves into an inverted spin. Serving in the only Naval Air Reserve F-14 squadron can be a humbling experience, considering the vast store of knowledge and experience assembled there. My pilot and I were two of the most junior aviators in the squadron, though our combined flight time was well over 2,000 hours.

We were scheduled for a I v I on a beautiful Texas morning just days before leaving for a two-week SFARP detachment where we were to work with VF-45 as adversaries. We thoroughly briefed out-of-control recoveries before our flight, and I am sure that helped our crew coordination. We briefed each other on what we expected the aircraft to do and what the instruments would show us. We also briefed crew coordination during an OOCF emergency.

The flight was going smoothly after radar intercepts to engagement and one visual set-up. Our aggressive one-circle maneuvering was working well, but our opponent was also countering effectively. Our last run was a butterfly set-up at 18,000 feet MSL. The hard and soft decks were prebriefed at 7,000 feet and 12,000 feet, respectively.

At the pass, we turned to force a one-circle fight as before, but after one turn, this engagement developed into a vertical looping fight. We were effectively across the circle, chasing the other aircraft uphill, using low-speed maneuvering at the top to work our way into parameters for a shot (heaters and guns only). On our third trip uphill, at about 50 degrees nose up, our opponent began to fall off his climb. We began a roll to the left as our airspeed crept toward zero at 16,500 feet MSL. The momentum of the roll carried us to about 120



by Stephen P. Davis

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Spin in a Tomcat

degrees of left overbank, still nose up as the aircraft hit zero airspeed and began to fall.

NATOPS says that the entry into an inverted spin will be slow and deliberate, giving the pilot plenty of time to react. But that's not the way this one happened. Given the aircraft attitude, I believe that the sudden sideways rush of air caught the vertical stabs and ventral fins, inducing an instant right yawing moment as the aircraft continued to roll inverted.

The pilot called, "Knock it off! Knock it off!"

I said, "Lock your harness!"

The pilot responded, "Zero angle of attack."

I called, "Right spin arrow."

The spin arrow appeared and stabilized at 50 degrees per second. Right after my spin arrow call, the left engine quit, taking with it all electrical power, i.e., ICS. I was hanging in the straps spouting off the inverted-recovery procedures when I realized I was talking to myself.

As we approached 12,000 feet MSL (10,000 feet AGL), I knew it was about time to get out of the airplane. Just as I was about to pull the handle, the spin broke, so I hesitated. An instant later, the jet was bucking like a bronco at the Fort Worth rodeo. The aircraft stabilized nose down, and the pilot smoothly recovered with a 17-unit pull. The right generator finally picked up the load as we leveled out, and the radio came back to life. After restarting the left engine, we joined up on our wingman, and headed home to debrief.


Several valuable lessons can be learned from this departure and recovery. An inverted spin is very disorienting. That has been said many times before but have you really thought about it and briefed it? How do you know if you are disoriented? My pilot was sure he was upright and spinning left, when exactly the opposite was true. As he put in recovery procedures for an inverted right spin, he was sure it was wrong, but he trusted his instruments and recovered the aircraft.

In the back seat, I had no doubt that we were inverted, spinning right. I believe the difference in our perceptions was that my view outside the cockpit was somewhat limited, restricting my visual cues on spin direction and attitude. By the time I looked outside, I knew we were inverted, and the spin arrow confirmed my perception of the spin direction.

Pick up one of your handy little debrief models and demonstrate an upright left spin, and then try and change it to an inverted right spin. It's not as easy as it sounds.

The inverted spin was not physically uncomfortable, which partially contributed to the pilot's incorrect perception of an upright spin. I felt no "eyeball out" G's, and the negative G was reduced by the vertical velocity of the aircraft. I was hanging in the straps, but it was not as uncomfortable as level inverted flight.

About the time I was saying, "Right spin arrow," my pilot heard the stall warning tone blaring in his helmet. He never heard my call. My calmness had betrayed me, as I had used a normal speaking voice that had been drowned out by the stall tone. "Directive comm" should always be used emphatically during crew coordination in an emergency.

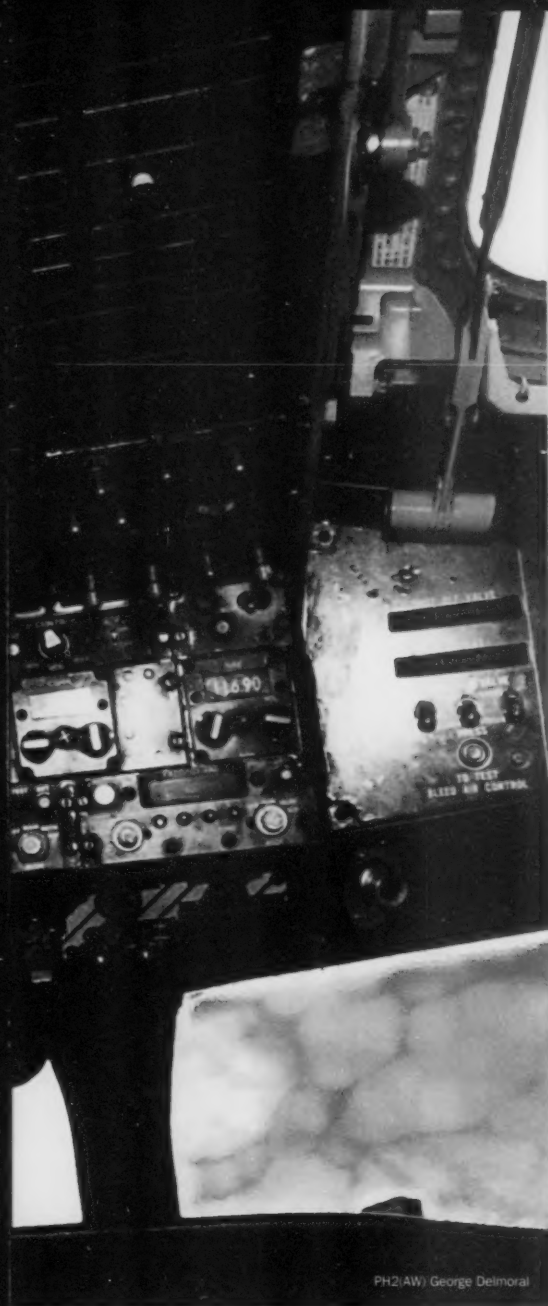
Think about your ejection decision. Are you hardwired to pulling the handle at 10,000 feet in an inverted spin? I thought I was. Though our spin broke just as I was about to pull the handle, I could easily have justified an ejection. After second-guessing my decision for days, I finally realized that I did what we all do every day in the cockpit. I evaluated the situation and acted accordingly. I also discovered that I am not so attached to the Tomcat that I will ride one into the ground in an attempt to recover it. I had already decided to pull the handle; my decision was to delay and see if the change in the spin would lead to something. If the spin hadn't broken as it did, our jet would have been another statistic for the Naval Safety Center. 

Lt. Dunlap flies with VF-201.



Crash!

by Lt. Larry Hushour



PH2(AW) George Delmoral

Our MISSION WAS TO DELIVER a Hummer to the NADEP for a dome swap. The day before, we had made it as far west as Fort Worth, and had saved the government lots of money by spending the evening at my parents' house, ridding them of their pizza coupons. The next morning presented a typical hot Texas day. Clear for miles, we could easily see the oil fields of west Texas as we pressed on to our first waypoint, Abilene.

At altitude, we broke into the typical E-2C mission dialogue.

"Hey, it was nice of your mom to fix these lunches."

"Anybody get a Dr. Pepper?"

"Where are the Cheetos?"

In an effort to increase cockpit situational awareness, while passing over Weatherford, I pointed out where an old girlfriend lived.

As we approached Abilene, I looked down at the charts to give the pilot his outbound radial and to anticipate the points beyond. The pilot, who was actively scanning everything that moved in the cockpit, said in a somewhat curious voice, "Hey, look at your windshield, it's delaminating. It's gonna break!"

I looked and saw my windshield expanding like a balloon. It made a "pop" noise, and one of the panes spider-webbed so bad I couldn't see through it. It took a moment to assess the damage. It was hard to tell which pane had cracked. I immediately had our back-ender break out his checklist and asked him to read out the steps for a cracked windshield. The pilot looked out his window and was glad to see Dyess AFB only 10 miles to the south.

The extent of the damage was dramatic, and combined with the fact that I was sitting right behind it, made it easy to declare an emergency. The very experienced Grumman pilot needed no prompting in slowing the aircraft, dirtying up, and getting us down quickly while holding airspeed to a minimum.

We quickly completed step 1 of NATOPS: "Windshield anti-icing switch... OFF." My helmet visor was already down, completing step 2. The next step required the crew to don oxygen masks. My first thought was that this step was solely in case of loss of cabin pressure, and since we were descending rapidly through 10,000 feet, I only hooked up one side of my mask and stayed on my regular mike.

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The next step was to pull the right windshield's anti-ice circuit breaker. Easy to say, but this proved to require unusual flexibility. I tried leaning back and left as far as I could, but couldn't make out the labels on the circuit-breaker panel. My mask was an extra burden as well, tugging my head in the wrong direction. I quickly grew impatient with the delay, unhooked the mask, undid my upper koch fittings, found the CB and finished the step. With the breaker pulled, I reattached the upper kochs and once again became an asset in flying and landing the aircraft.

As we closed Dyess, the cracks were expanding, and at times it was hard to tell if the inside windscreen had been affected as well.

When we got below 10,000 feet, I finally found time to feed the controllers more details. I also had a moment to consider the uniqueness of our situation, and the possible consequences if the windshield were to come in on me. I told the pilot he had the radios for a second. I transferred my comm cord to my mask and strapped it on tight. When the pilot

reminded me that we were below 10,000 feet, I explained my concern was strictly cosmetic, and not hypoxic. He looked at the windshield and said, "Good point."

Finally, we were up tower and on final. After landing, we cleared the runway and were followed to the transient line by the standard Air Force parade that accompanies an "emergency." The pilot poked a little fun at me and my concern for my face. I gave him a nervous laugh that carried over the radio as I thanked everyone at Dyess for their help. Of course, they thought I was hypoxic, and as soon as we shut down, they had a flight surgeon in the cockpit looking at my finger tips and wanting to play patty-cake. The rest of the crew assured him that I was always that way.


Once out of the aircraft, we inspected the damage. We saw that only the outer pane of my windshield was cracked. We also found that the crack was a result of arcing in the lower left corner of the windshield.

In our postflight debrief, we discussed two important lessons. First, go beyond NATOPS if time permits. NATOPS tells the entire crew to don oxygen masks as a step in case of loss of pressurization. In my case, putting the mask on also seemed a prudent step to prevent damage to my face. When your brain starts telling you, "I think I've done everything required," it's time to look beyond NATOPS for other items to help your situation.

Lesson No. 2, do all the emergency procedures, not just the boldface. Sit in the cockpit or simulator and actually touch the switches and breakers. Locating the windshield anti-ice circuit breaker was much harder than I expected.

I gleaned a couple of other lessons from this event based on "what ifs." What if we had been IMC? Descending out of altitude would have required a lot of timely coordination with controllers. How would such a delay affected us if the inside pane had been damaged, too? What if it had been the pilot's side? With our two pilots, our situation would have not changed greatly.

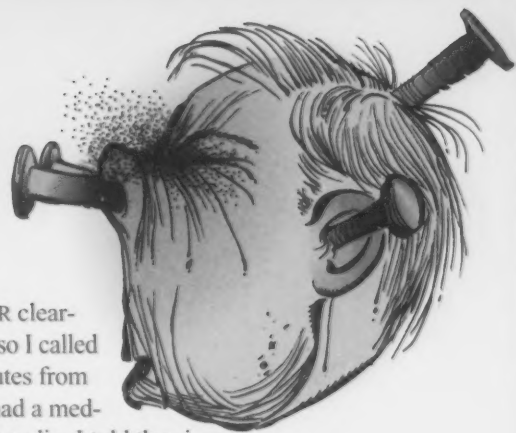
Later that evening we found a great BBQ place, and the next day we accomplished our second major feat – flying commercially out of Abilene! NADEP did a great job in rescuing the aircraft, and we returned the next week to finish our mission.

Minor cracks in E-2C windshields are not uncommon. It's one of those sooner-or-later occurrences that doesn't completely surprise you. Every adversity has varying levels of seriousness. It is up to the people in the aircraft to determine when to declare an emergency. I've never heard of a pilot getting dinged by his CO for being conservative. 

Lt. Hushour was a Navy acceptance pilot at the Defense Plant Representative Office Grumman in St. Augustine at the time of this story. He is currently assigned to VAW-77.

Squeeze Play

by Lt. David A. Goodman



WE BRIEFED FOR AN OUT-AND-IN TO Osan, Korea, and manned up early. We were 4,000 pounds short on fuel. After quick calculations and a review of the forecast, which told us the winds at altitude were mild, we knew we could make it. We decided on a go-no-go point and the fuel we needed to get to Osan from that point. On climbout, lead asked for a high cruising altitude to help our fuel figures. We leveled off at FL 310, giving us a cabin pressure of 14,000 feet.

It soon was obvious we would not arrive at Osan with enough gas, so we kissed off our lead and turned back to NAF Atsugi. Tokyo Control gave us a climb to FL 330. Fifteen minutes west of the field, we saw the area of one of the better low-levels in Japan. We decided to fly the route later so we would not lose a sortie. On deck, we grabbed a new weather brief, a quick bite and briefed the low-level. We were soon airborne once again.

A high cloud layer covered the entry point; underneath, the ceiling was above minimums. We entered the route, but after two minutes, the ceiling had dropped. We turned and exited over the entry point VFR. We climbed and flew over the route, hoping for a chance to descend back onto the low-level.


Around the second turn point, the weather was clear, and we dropped down to see if we could work the next leg. At 1,000 feet AGL (3,000 feet MSL), the weather was below minimums. We started another rapid VFR climb. Passing 5,000 feet MSL, ECMO 3 said, "Guys, I don't think I can do much more of this up-and-down stuff."

He was in a lot of pain. At 14,000 feet, which was the lowest altitude we could maintain VFR back to Atsugi, he told us he had pressure and pain behind his eyes. His right ear would not clear, and his jaw and teeth hurt. Our cabin altitude was 8,000 feet.

We couldn't get an IFR clearance from Tokyo Center, so I called Yokota Approach 10 minutes from the field to tell them we had a medical problem. On the back radio, I told the airwing duty officer about our situation, and he got a vehicle ready on the flight line to take our backseater to the hospital.

ECMO 3 was out of the plane as soon as we stopped at the line. His eyes were red and moist, and it was obvious he was still in pain. Someone gave him a bottle of Afrin spray as he was rushed to the hospital.

He was hard down for a week with blood in his sinuses. He had felt OK to fly, having just gotten over a cold. He was fine on the first flight, and he hadn't had a problem at twice the cabin altitude on the second flight. If the problem had developed on that flight, it would have been much worse when we descended.

Although self-medication is a no-no, an emergency bottle of nasal spray could have saved the day. Ironically, I had a bottle of spray in the front cockpit but couldn't get it to the NFO in the back. We've all gone flying even though we weren't feeling that great. We don't want to go to the flight surgeon or look like we can't hack it. But no flight is worth such a risk, and we always find out we made the wrong choice at the wrong altitude. 

Commercially available nasal sprays are short-term medications, not to be used for more than three days. The main danger is rebound nasal congestion. After three days, the spray has a reduced effect on the symptoms; the sinus problem returns, big time. Self-medication for aircrews is still wrong. Go to your friendly flight surgeon. He can help you. It's not bad to down yourself medically.—LCdr. Greg Abad, flight surgeon, Naval Safety Center.

Lt. Goodman was with VAQ-136 at the time of this story. He is now assigned to VAQ-142.

Someone gave him a bottle of Afrin spray as he was rushed to the hospital.

Surviving a High



by Lt. Derrick J. Busse

We PUNCHED OUT of the jet at about 550 KIAS, in a 50-degree dive, below 4,000 feet. I was unconscious for a few seconds and don't remember the ejection. I came to just after hitting the water. My SEAWARS and FLU-8 worked as well as the Martin-Baker GRU-EA7 seat.

At first, I had no idea where I was or what was happening. It was like being in a bad dream. Finally, I realized what had just happened. At the same time, I started going through survival-training procedures. I made sure I was separated from my chute and was not entangled in the lines. I saw that my lobes hadn't inflated. I realized that my raft had not deployed, so I began hauling the lanyard up to manually deploy it.

When my left arm didn't respond, I noticed that I had a few joints in it that hadn't been there a few minutes ago. My left hand, arm, and shoulder blade were broken in six places and were numb. My body had temporarily shut down all sensation from the arm. I began pulling my raft and seat pan up with my good arm and my legs. I was also starting to realize that I was in the ocean after ejecting.

Before I had the seat pan up, I heard someone crying out in pain. I looked around and saw one of the other crew members about 50 yards away. I yelled back that I was alive and that my arm was broken. He reported that his left leg and arm were broken and that his right arm was injured. He looked like he was struggling to stay up and was beginning to panic.

I told him to stay calm and that I would swim to him. I used my good arm and legs

to sidestroke through the 5-foot-plus seas. When I got to him I saw that two of his lobes hadn't inflated. He was still thrashing about and wasn't really aware of what had happened, either. I made sure he was free from all his parachute lines, and I tried to inflate his SV-2 but the CO₂ bottles had already discharged.

I propped up my left side against his deflated side to keep him afloat. Treading water, I tried to haul up our rafts and keep us together for warmth. The water temperature was 61° F, which, combined with loss of blood and the shock from our severe injuries, was quickly working to incapacitate us.

About this time, I saw and heard our wingman circling overhead. I was never more glad to see a Prowler in my life. I used my good arm to splash water to get the crew's attention. The Prowler circled directly over us, so I assumed they had seen us. Shortly thereafter, I heard then saw the helo. I realized the swimmer would get to us before I could have done anything with the rafts with only one arm, so I gave up on that plan. I splashed water again.

The swimmer was in the water shortly. When he got to us he checked that we were clear of our shroud lines. I told him our condition and told him to take my crewmate first as he was more badly injured, more unsettled, and less able to stay afloat by himself. The swimmer told me to let go and give him some clearance. I had to use my good arm to pull my bad one from my squadronmate. Because of the cold, the good arm had lost a lot of dexter-

Speed Ejection

ity. I also didn't want to let go of the other man until I was sure the swimmer had him.

After I had separated from him, the swimmer told me to stay away, so I tucked myself into a ball to conserve heat. It seemed forever before the swimmer returned. I was feeling the effects of hypothermia. Remaining conscious took all my energy and determination. The swimmer confirmed that my left arm was injured and told me to let him do the work. He then quickly stripped my seat pan, hooked us to the J-hook and took me up the hoist. It was a quick ride to mother where I was stabilized, then a long ride to Balboa.

A lot of things helped keep the two of us alive that day. There are several things I should have done to help prolong my survival time. The only signaling I did was splashing water. At first, I could not find my flares or strobes (our SV-2s were pretty badly shredded by the wind), and I stopped

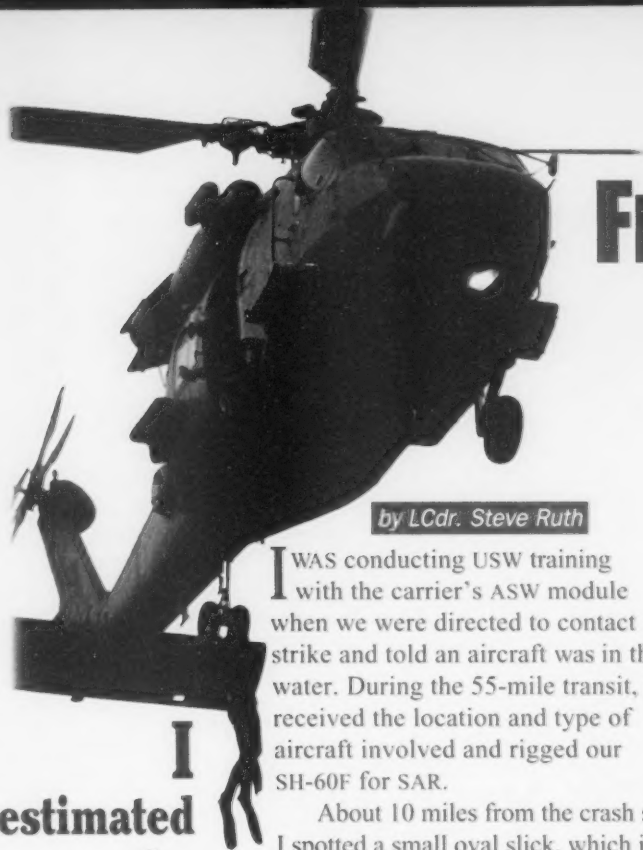
looking when I assumed that both my wingman and the helicopter crew had seen us.

Our jet had disturbed the water quite a bit, but because of the dive angle, the slick from the oil and wreckage was small, maybe 300 yards in diameter.



Charles L. Minke

From



by LCdr. Steve Ruth


I estimated the survivors had been in the 61-degree ocean for a little more than 30 minutes.

Our helmets came off in the ejection but were nearby, and one of the sea-dye markers had deployed. If it had been night, our odds of survival would have been much smaller.

A strobe is visible even during the day. Helmets and day-side smoke are also useful. I should have kept searching until I had found another signaling device. I was in the water for 35 minutes. When I reached medical on the boat, my core temperature was 85° F; a few degrees cooler and I would have been a goner. I was wearing thermal socks and long underwear, but not my anti-exposure suit. The air temperature that day was 75° F, and the water 61° F, well above the region where anti-exposure suits are required, but those tables do not take into account injury, dehydration or shock.

We always brief getting into our rafts quickly, especially in cold water. Have you ever practiced getting into a raft without the use of one or more of your limbs? How about manually inflating it in case of a low-altitude ejection? How about helping an incapacitated crewmate into a raft?

The training scenarios we go through at water survival every three or four years are sterile and don't really consider ejection injury, shock and disorientation, rough seas, or the loss of survival equipment during ejection.

Next time you're in survival training, try doing some different activities while simulating an injury, or at least think about how you would go about doing so. 

Lt. Busse flies with VAQ-135.

A new program will include scenarios involving incapacitation, damaged limbs or survival gear. According to LCdr. Jim Norton, MSC, director of NAOMI's Naval Aviation Survival Training Program, the new training will be nearly complete by the time you read this story. Look for the new, scenario-based, water-survival training the next time you visit the APTU in your region. — Ed.

I WAS conducting USW training with the carrier's ASW module when we were directed to contact strike and told an aircraft was in the water. During the 55-mile transit, we received the location and type of aircraft involved and rigged our SH-60F for SAR.

About 10 miles from the crash site,

I spotted a small oval slick, which is characteristic of steep-angle impacts. Another EA-6B and an S-3B Viking were overhead and reported three survivors in the water near the crash area. The weather was nearly perfect for a visual search: midday, scattered clouds and a 15-knot wind. The sea state, however, was moderate with five-to-eight-foot swells.

As we reached the crash slick, my copilot saw two survivors on the north edge of the slick and my first crewman saw the third survivor near the south edge. I maneuvered the helo to pass between the two groups and noticed the survivor on the south edge appeared dead, but his vest was fully inflated. The other two survivors were splashing, so I made the approach to recover these two men.

As I brought the helo into a hover, I could clearly see that one of the survivors had only one side of his vest inflated. The other survivor, with a fully inflated vest, was holding his companion's head out of the water. I estimated the survivors had been in the 61-degree ocean for a little more than 30 minutes, and I knew we had to get them back

From the SAR Crew's Perspective

on board the carrier quickly before their body core temperatures reached a critical level.

The rescue swimmer worked fast and had the first survivor ready for extraction in just under 10 minutes, despite the sea state and the serious nature of the survivor's injuries. The first crewman told me that the survivor was in extreme shock and that he had multiple compound fractures on one leg, broken arm, a broken shoulder and a broken collar bone.

I told my copilot to relay the first survivor's condition back to the carrier as I moved in to pick up the second survivor. The SAR swimmer had the second survivor ready in about five minutes and on board the helo a few minutes later. As the first crewman and the SAR swimmer were attending to both survivors, I positioned the helo over the third survivor. I could see he was dead. We lowered the swimmer back into the water. He confirmed that the aviator was dead and said he would remain with the crewman until the next helo arrived, because there wasn't enough room in the helo's cabin area for two more people.

I waited until I was certain the inbound helo crew saw us before I departed for the carrier.

Even though each SAR event is different in terms of time, environment and survivor condition, there are elements that remain constant. The rescue always takes longer than expected, and everyone saturates the radio. During an actual rescue, time is the critical factor to the SAR helo crew and, more importantly, to the survivors. Open-ocean rescues are demanding in the best of conditions. If the SAR swimmer encounters big waves and injured survivors, the recovery will take longer.

After this steep-angle, high-speed ejection, it was a race against time for the SAR helo to get the survivors. Fortunately, the

weather conditions were near perfect. We won the race, and the survivors lived.

The on-scene commander (OSC) and the SAR crew can become paralyzed and ineffective if overwhelmed with situation inquiries from the ship. The demand for information is so great the radios become jammed, and the anxiety level increases to the point that all data is conflicting, fragmented or inaccurate. During this SAR, the radio traffic from the carrier strangled the OSC's ability to accurately relay important information and coordinate other SAR assets. In short, the carrier was trying to perform the OSC's duties.

The outcome of this SAR could have been much worse if the mishap had occurred at night. Even though all HS crews use night vision goggles (NVGs) and are proficient at night SAR, it takes longer to recover survivors because it simply takes a SAR swimmer longer to prepare a survivor for hoisting. In this situation, none of the survivors retained their helmets in the 550-knot ejection. Without their helmets, they would have been much more difficult to locate at night.

Water-survival training every three to four years is a safe and controlled environment in which to practice, but it is far short of reality. Anyone flying over water needs to be prepared for a less-than-perfect survival situation. Think about surviving without flotation, without the use of one or more limbs or without certain items from your survival vest. Think about the difference between a day SAR and a night SAR, and about what you would do to increase your chance of being found and decrease the time for your recovery.

We all train extensively for our various missions. Are you ready for one of your toughest missions – survival in the open ocean?

LCdr. Ruth flies with HS-6.

by Lt. Scott LePage

IRAQ. ANYONE who has been involved in Operation Southern Watch knows what fear that word strikes in the hearts of men and women – fear, not of facing enemy weapons or of being shot down, but of three-hour night hops, difficult GCI control, night traps and high, fast KC-135 tanking.

As a nugget pilot, I was excited about seeing the elephant. I would be one of the few with actual green-ink time. (In deference to those of you who served during Desert Storm, my green ink should be more olive drab.) I learned the most dangerous thing out there during Southern Watch was human error.

I had a few flights into the “box” under my belt and was comfortable with the missions and ROE. Although the fires were out and the SAM threat very small, I approached each box hop cautiously. I didn’t want to be the first guy in the air wing to spend the rest of my cruise in a POW cell.

Our squadron had briefed and rebriefed many important tactics, procedures and techniques for a safe and effective CAP. Most of our time in the box involved tac turns and seeing the birthplace of civilization, the so-called Fertile Crescent of the Tigris and Euphrates Rivers. When danger arose, I was completely unprepared.

It happened out of the box, after I had successfully rolled in on a potential “adversary,” the KC-135. I had duked it out with this guy before. Two-circle, one-circle, it really didn’t matter. Just when I thought I’d beaten him, he would climb, accelerate and

turn, sending me into a PIO that would make FAM-I T-34 students proud.

After completing our CAP, we were scheduled to go to the tanker to gas up for the flight home. We were at 28K above a bumpy undercast. It’s no fun tanking from the 135 at that altitude in a Tomcat. Not only does our trusty F-14A not like high altitudes where it is less stable and has a smaller stall margin, a combat loadout means you have to use burner to stay in the basket. Wah, wah, right? Anyway, that was my state of mind as I waited my turn at the hose.

I waited until we were cleared pre-contact, then I did my pre-tanking checklist. To avoid ingesting fuel into the ECS, one of the items on the checklist is selecting air source to the left side, which closes the valve on the engine behind the probe. The air-source push buttons are on the right console and are labeled “RAM, Left, Right, Both and Off” in that order, front to back.

Each button is a square piece of plastic, a little smaller than a Jolly Rancher candy, so they are hard to miss. The selected button spins a bit so that you can identify it by sight.

Snore From the Back

of the BUS




In that second, I knew what had happened. I had hit the air-source button, but not hard enough, and I had turned off the ECS. With my mask on, I hadn't noticed the lack of oxygen in the cockpit.

I never considered the ramifications of an ECS failure (in this case, pilot-induced) while on the tanker. During this busy period, the pilot has little time to check cabin pressure or look for signs of hypoxia. My RIO had taken his mask off to troubleshoot his mike because it wasn't working properly. He didn't want to be unable to transmit any safety calls, so he decided to deal with the problem immediately.

At that point, neither of us had any indication that the cabin pressure had dumped. He was nearly incoherent in less than a minute and asleep shortly afterward. He never knew what had hit him until he woke up a couple of minutes into the ride home. Fortunately for us, it was the RIO who had his mask off. He said it was one of the two scariest incidents he had experienced in his career.

During the flight home, I thought about what happened. We had never really been in much danger, but I knew I had shaken an experienced aviator. I had never been a stickler for checklists, especially items that were inconvenient and didn't make sense. But I considered what would have happened if for some reason I had to take my mask off. I thought back to the chamber in Pensacola and wondered if I would have been able to put my mask on by the time I realized I was hypoxic. Being nervous and highly tasked, I was probably breathing hard and would have succumbed that much faster.

We learn the signs of hypoxia early in our training. The problem is that you have to be looking for them. In a high-task environment, any time you are off oxygen, you should be checking for those indications. 

Lt. LePage was flying with VF-21 at the time of this story. He is currently the flag aide to CNATRA.

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I slid into the basket and as I started to receive, I was working hard to keep the hose steady. At night, it's easier for the RIO to read gas off the totalizer in the back, leaving the pilot free to concentrate on keeping the jet smooth. My RIO, an experienced O-4, and I decided on that plan after checking to make sure our totalizers agreed. He read off each thousand pounds as we quickly sucked up our share.

Shortly after plugging, however, he began to sound preoccupied. His calls were less frequent and softer. I thought he was troubleshooting some problem, but then his calls stopped altogether. I thought we had had an ICS failure but with my mask on, I couldn't yell to him. I figured that after we left the tanker, I'd take it off and determine the problem.

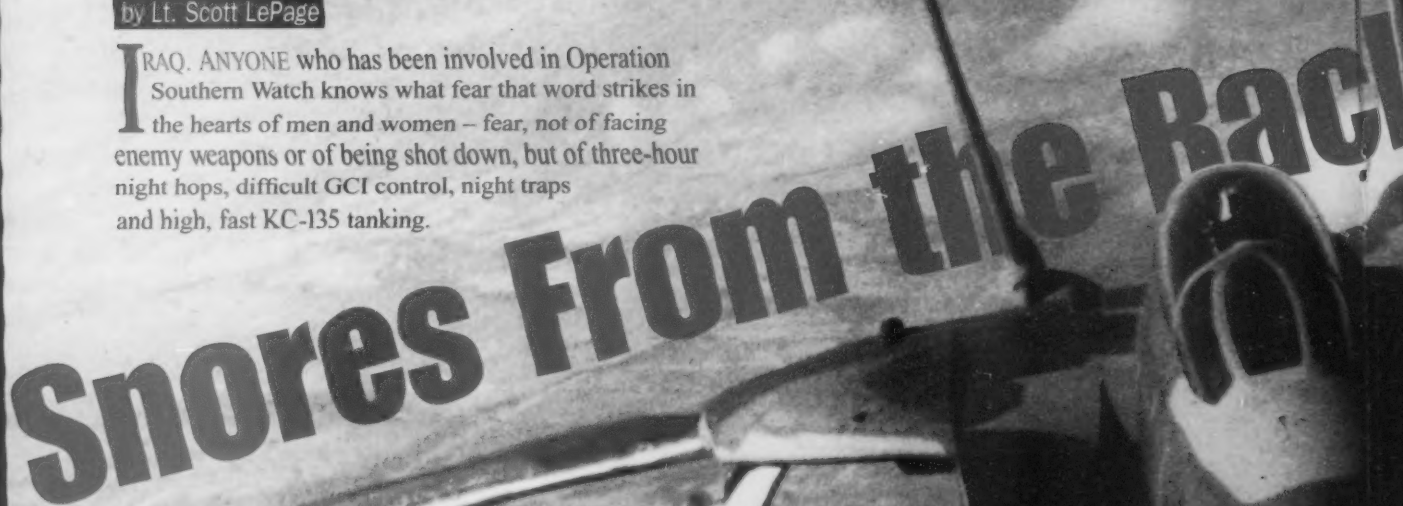
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There was a squeal from the canopy as the cabin pressure squeezed back to normal and air escaped through the canopy seal.

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BRAVADO

BZs require an endorsement from the nominating squadron's CO and the appropriate CAG, wing commander or MAG commander. In the case of helo dets, the CO of the ship will suffice. A squadron zipper and a 5-by-7-inch photo of the entire crew should accompany the BZ nomination. Please include a squadron telephone number so we can call with questions.



AW1 Kevin Sheldon
Lt. Chris Puckett
Lt. David Royo
AWAN Paul Mudge
AW2 Dave Norman
Lt. Denny Bourbeau
AT3 Brian Prout
AE1 Jeff Houk
Lt. Rob Johnston
Not shown:
Cdr. Robert Winneg
Ltjg. Richard Freeman
AW2 Steve Nelson

VP-1

This crew had finished its tactical training mission and was preparing to turn over to the relief aircraft when an off-duty flight engineer complained of feeling sick. The weather was good, and the flight engineer was experienced, so he wasn't airsick.

Seconds later, he grabbed Lt. Royo's arm and asked the PAC for a doctor ASAP. The FE now complained of a tightness in his chest and throat, shortness of breath, and discomfort in his arms and legs. Lt. Royo told Lt. Johnston (PPC), Lt. Bourbeau (TACCO), and Cdr. Winneg (squadron CO and mission commander).

Lt. Royo turned for home, while Cdr. Winneg and Lt. Bourbeau talked to the crewman. The crew decided that Lt. Royo, who

was trained in first aid and CPR, and AWAN Mudge, who had once been an emergency medical technician, should be ready to give first aid if required.

Lt. Bourbeau and Lt. Puckett (nav) told the tactical support center, requesting base emergency response teams, while the pilots coordinated emergency clearances to NAS Whidbey Island.

With 40 minutes to touchdown, the situation deteriorated as the pain in the FE's arms concentrated on his left side and upper chest. The crew's greatest concern was the possibility of a full-blown heart attack. AWAN Mudge administered oxygen, placing the FE on the deck with his feet elevated. The airman also loosened the victim's flight suit and monitored the FE's

alertness by talking to him or squeezing his hand. Within minutes, the FE could not speak, and his response weakened.

As the P-3 landed, the emergency vehicles positioned themselves. The squadron had completed an evacuation drill with the base firefighters only days before. Now, taking advantage of the practice session, the crew logged the events, writing down the patient's personal information. The response team took the FE to the base hospital.

The victim's symptoms were, in fact, the first indications of a heart attack, but because of the quick action of his shipmates, he was under medical care in a hospital when the actual attack occurred. The FE is recovering and expected to return to duty.



Capt. Raymond T. Nolin
Cpl. Kenneth J. Megofna
Maj. Ken R. Crouse

HMT-303

Ferrying a UH-1N to MCAS Camp Pendleton from Del Rio, Texas, the crew of Atlas 04 experienced a hard right yaw along

with a failure of the No. 2 power-turbine gauge, overspeeding Ng and increasing Nr. They quickly reduced the No. 2 throttle,

which controlled the overspeed, and turned toward a suitable landing site.

While en route, the crew analyzed the unstable engine by cross-checking temperatures and pressures of both engines. Over the rugged, desolate terrain of west Texas, they kept the No. 2 engine at flight-idle until they were sure of a landing.

Having just launched near maximum gross weight, Capt. Nolin recalculated power-available limits and found they had little single-engine margin. As Maj. Crouse (PAC) maintained safe single-engine flight, Capt. Nolin along with Cpl. Megofna (crew chief) monitored engine limits. Maj. Crouse made a sliding landing.

Inspecting the engines, the crew found the No. 2 idler gear had sheared, disconnecting the oil-cooler blowers, power-turbine governor, and power-turbine tach generator from the combining gear box.



Lt. John Cruz
AD2 Michael Holcomb
Lt. James Peters

AEC Donald Woody
PHAN Jimmy Waugh
Lt. Susan Merriman

VXE-6

This LC-130 crew was returning to McMurdo Station from a logistics flight. At 27,000 feet, their LC-130's cargo door failed, and the cabin depressurized rapidly. After an emergency descent over the polar plateau, with ground-level elevations above

9,000 feet MSL, they diverted to South Pole Station to let their passengers off and assess the damage to their Hercules.

During the emergency descent and landing, the crew had two more unrelated malfunctions that required emergency action:

a generator failure and an unsafe gear indication. They recycled the gear and eventually got a safe indication.

At the South Pole, the crew braved temperatures of minus 45° C to inspect their aircraft and to ensure it was safe for flight. Although shutting down at the South Pole has its risks, the crew kept in touch with their CO, using risk assessment principles to make the decision to return home.

Shutting down an aircraft can also mean the loss of an asset for several weeks. The longer an aircraft sits and "cold soaks," the more the problems grow as the aircraft and its systems self-destruct – oil leaks from props, engines, landing gear and ski struts. Doing maintenance in the terrible cold, exacerbated by high wind-chill factors, is also hazardous. With an elevation of 9,301 feet at the pole, many people also develop altitude sickness.

Because there were only enough emergency oxygen masks for the crew, they left the passengers before ferrying the damaged, unpressurized aircraft over the 14,000-foot Transantarctic Mountains to McMurdo Station for a ski landing.

I'll Take a Dull Tanker Flight Anytime!

by Lt. Don Parker

"Wow!" What a beautiful day to fly," I exclaimed to my BN as we stepped outside onto the flight deck from the fluorescent steel tunnels below. We made our way toward the LSO platform where our provider of airborne fuel, NH 500, waited. We approached, doing the normal area FOD checks, then went on to the standard tanker preflight. All we really needed today was engines, wings, hydraulics and a good buddy store.

Satisfied that the Intruder was ready to fly, we manned up, strapped in and started engines and systems. One of our troubleshooters quickly solved a compass problem and gave us the old thumbs-up. I returned it, indicating we were ready, too.



PHOTO COURTESY AIRCRAFT

I scanned the fire lights immediately in front of me, then looked outside to see the shooter jumping up and down, wildly giving the throttle-back signal.

The taxi director broke us down. We continued takeoff checks and started to taxi forward. After 90 degrees of left turn and a couple bump-bumps, we were over the 1- and 2-wires in the elephant chain for cat 3. Moments later, the JBD dropped for us as we spread the wings, completed takeoff checks and casually rolled to the cat.

The BN rogered a relatively light 52K weight board as we only had a 22K fuel load. To my dismay, we were missing out on the most exciting part of the normal tanker flight, the big 57K cat shot. Oh, well, we were only scheduled to give 2.5K each to two fellow Grumman products for their double-cycle mission.

A little forward, a little left, a little right, now tweak that launch bar into the cat track, ahhh... ready for the shuttle to come back. When the shuttle came back, we were ready to go, but the jet told us otherwise. Three minutes later, we were both out of the cockpit on our way to medical for a little treatment and a lot of questions.

Although the treatment was completed quickly, the questions lasted more than two-and-a-half months. On the good-day-bad-day scale, this one had quickly moved to the bad side. Here's what happened.

"Power's coming up," I said, "We're in tension. Strut-lock light is on and... oops it's still on."

I released the cat grip to cycle the switch, then grabbed it again to get the light to go out as a strut-lock light indicates a soft nose strut, which is bad for a cat shot.

"Hmm, strut-lock light still on, but we'll take it." I continued my mantra. "I got a good check out of the chocks. The strut is hard. Good oil, hydraulics, rpm, egt... fuel flow's looking good. I'm ready to... uh-oh, we've got a barberpoled flap." I started to shake off the shot because something just wasn't quite right.

Right after I had moved the throttles to military, I noticed a light fog in the cockpit, but it was no more than what sometimes comes from the air conditioning at

military if the temp is set a little too hot. For the first flight of the day, the fog was normal. After I'd given the suspend signal, however, it became a little thicker, and the BN called, "Smoke and fumes in the cockpit. Get the gang bar off." (The gang bar secures bleed-air to most of the jet's vital areas and is the first step in any fire.)

I thought it was a good idea, so I secured the gang bar and also started the boldface for smoke and fumes in the cockpit, a three-step process securing cockpit air with the air-conditioning master panel between the pilot and BN. I started reaching for the appropriate switches when the Boss said, "Five zero zero, throttle back, you're on fire."

I scanned the fire lights immediately in front of me, then looked outside to see the shooter jumping up and down, wildly giving the throttle-back signal. I retarded the throttles and again scanned across the fire lights. None of them was illuminated. I looked past my BN, out the right side of the cockpit and saw a lot of people moving about. I didn't see the fire hose that was aimed straight down our right intake.

I put two and two together and assumed that the fire was, in fact, outside the aircraft because I didn't see any fire lights and had always heard our fire-warning system was reliable. We were in a tanker, and these old, reliable Grumman aircraft frequently leaked fuel and other vital fluids on the deck. I figured we'd spilled something on the cat and had a fire going. Then the Boss said, "Five zero zero, if you haven't secured your engines yet, do it now."

Just before I went for the throttles, I paused, looked at the electric canopy switch, and wondered if perhaps I should open the canopy first. I quickly thought better of it as we were still strapped in, and our seats were hot, so I secured the engines.

Next, I thought about getting out of the jet. I'm larger than the 95-percentile man, and ejection on deck was simply not an option.

I told my BN, "Let's safe up and unstrap."

I secured my oxygen in preparation for a rapid egress once the canopy was open. Now the only problem left was to open the canopy and get out, which seemed simple enough at the time, but a moment or two later, we found out how hard it was.

There are five ways to open the canopy from inside the cockpit. The normal way is an electrical switch beneath the glareshield between the pilot and BN. It requires power from the generators and hydraulic pressure, which we didn't have. The next two methods use a manual valve between the pilot's legs near the base of the stick in combination with a battery-powered electric pump or a manual hand pump on the pilot's right side. The fourth method requires the canopy seal to already be broken, and it disconnects the canopy from the actuator. The fifth way is to jettison it.

The normal method wasn't an option, so I tried the battery-powered hydraulic pump with no reaction. I then grabbed the valve a little tighter and told my BN to pump the manual handle. The seal broke, and the canopy began moving, which gave us a sense of relief that we wouldn't be trapped inside. Unfortunately, it stopped after only one or two inches of travel. I pulled the valve even harder and told my BN to keep pumping, but it wouldn't move any further.

In three seconds, acrid fuel smoke from inside the aircraft filled the cockpit. Now, I had a really good reason for getting out of the jet. I couldn't breathe or see any further than my visor. I held my breath briefly while feeling for the pump handle and continued trying to open the canopy. It wouldn't move, and I couldn't hold my breath any

longer. I stopped trying to open the canopy and reached for the oxygen switch, but it wouldn't budge. While I was reaching for the switch, my BN called to blow the canopy. Up to that time, I wanted to avoid blowing it because I had seen crash crew trying to climb up the boarding ladder and their hands coming through the slightly open canopy. Now that I couldn't see outside, I was especially concerned about anyone behind the canopy. After nearly 40 seconds of breathing the noxious fumes and nearing unconsciousness, however, we knew it was our only chance.

My BN found the jettison handle first and pulled it. The smoke began to clear quickly.

"Let's get out of here," I said. We met in front of the jet where I noticed for the first time all the crash crew with fire hoses dowsing the jet in AFFF and smoke pouring out of every orifice on the airframe.



I told the crew with the stretcher that we wouldn't need it because we were able to walk. That's when my greatest fear became a reality. The stretcher wasn't for us but for a member of the crash crew who had climbed up on the aircraft and tried to disconnect the canopy from behind. The canopy hit him when we jettisoned it and knocked him off the aircraft.


We made our way to the paraloft to undress, then went straight to medical. They didn't want to admit us because there had been a fire on the flight deck, and they were about to be overrun with casualties. When they smelled the smoke on our flight suits and realized that we were in the fire, they let us in for treatment.

I learned a few lessons that day and during the analysis of the following weeks. Our community has a mindset that you are safer inside the jet than outside during a flight-deck fire. The rationale is it is usually a

flash fire caused by spilled fuel outside the aircraft and extinguished quickly by the crash crew. This is generally true, and it was established after the losses or injuries of friends in past fuel-pit fires. As a crew-coordination item, we brief our actions in detail any time we hot refuel.

Not every fire, however, is a fuel-pit fire where initial flash will probably dissipate quickly. Each situation has its own circumstances, and aircrew should consider other possibilities. Ours was a tailpipe failure, which eventually engulfed the entire main fuel cell and turned into a deep internal fire.

When thick smoke enters the cockpit, the jet is on fire and it's time to get out. The only way to get rid of the canopy in a fire is to jettison it if the decision has been made not to eject. I delayed jettisoning to prevent injuries on the flight deck, which is dangerous enough without 200 pounds of metal-and-plexiglas canopy flying around. That decision, however, put us in serious jeopardy; the jet was probably seconds from a major conflagration. The aluminum hydraulic lines had burned through, and hydraulic fluid was helping the fire. The 2-inch fuel lines feeding the engines are wrapped in stainless steel, but the extreme heat had nearly melted them, and the lines were leaking.

Even a boring tanker flight can be exciting. It's that day tanker flight in CAVU weather you've flown many times that might have an interesting twist next time around. Treat it like the challenging night strike where your skills are stretched to the limit. 

Lt. Parker was with VA-95 at the time of this incident. He is now a student at TPS.

"Smokin'" by Lt. Steve Gaze, the BN's account of this mishap appeared in the November-December 1996 issue. — Ed.

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A 250-Pou

by Maj. Peyton DeHart

SOME PILOTS are leaving naval aviation because they don't want to deploy and spend months away from their families. Others believe they can make more money by flying for the airlines. Me? I stick around because I can hardly wait to see what's going to happen next. I swear what follows is a true story.

A relatively inexperienced captain (and a Cobra pilot) checked in to the HMLA. He had not previously flown from our particular air station, so he was scheduled with the old-timers to give him the area fams.

The XO, a Huey driver, was looking at PCS orders and needed to make one last hop for night minimums before he left. The Huey fleet was uncharacteristically down that week, but there were plenty of Cobras to give everyone flight time.

The captain became the schedule writer, and he saw an opportunity to fly. Although this was his first night flight from the field, someone familiar with the pattern (the XO) would be in the cockpit. The safety folks surely couldn't balk at that.

Because it was mid-summer, darkness came late. The thunderstorms came early, however, rolling through from late afternoon with great crashing cells followed by dry, high-cloud sky. The same kind of weather had canceled night flights on the two previous evenings.

Because we had aircraft and Marines deployed to a different state for training, maintenance was down to one day crew.

When a break in the rain appeared, the new captain told the flight line he'd preflight early, between showers. The plane captain rolled a large, yellow fire bottle just in front of the nose, hung his preflight kit (PFK) from the handle, extracted a screwdriver and closed up the panels after the pilot's



Peter Mersky and
Laurinda Minke

nd Piece of Spaghetti

inspection. After the preflight, the sergeant put his tools back in the PFK and said, "ATAF" (all tools accounted for). The captain would be launching himself in three hours, the sergeant said.

The captain thought it was strange, but the sergeant said, "Oh, that's our SOP for night launches."

"OK," the captain thought, "every launch from an FBO on a cross-country is a self-launch. No sweat."

What the sergeant really meant was that he had been secured by his NCOIC, who didn't think the launch would go. Seeing the new captain, he used "SOP" to finesse the discussion. The captain, being new, wasn't going to voice discomfort with what he was told was the usual way of doing business.

At sunset, storm alley seemed clear for a while. The captain and the XO walked out to their preflighted Cobra at the end spot. The XO strapped himself into the somewhat unfamiliar but decidedly comfortable seat. The captain, who had ensured all was closed up, climbed in and fired it up. Runup completed, he asked the XO if he was ready.

"Ready," the XO answered. The Cobra rose smoothly a few feet, then slowly surged forward.

"You feel something?" asked the captain.

"No," replied the XO.

"Probably the tailwind. OK, here we go."

The captain taxied out toward the runway.

Meanwhile the fiscal officer, a long-suffering soul especially at the end of the year, was still at work, trying to get the books to balance, trying to squeeze more blood from the stone. Upon hearing the familiar whomp of one of "his" helicopters, he paused from his labors and went to the window to watch it glide by.


In the waning light, he saw something

that made his blood freeze. He burst out of the office, running full tilt and waving his arms, trying desperately to attract one of the aviators' attention. He wasn't a pilot himself, but he felt sure this particular crew didn't really want to fly this particular evening with a 250-pound fire extinguisher hanging from the left skid. They had hooked it as expertly as someone picking up a Spaghetti-O with a single chopstick.

The crew stopped at the sight of the fiscal officer running toward them. After a wind-whipped pantomime through the plexiglas, the crew got the impression that they should land the Cobra with a slight backward drift. The fire extinguisher, none the worse for the wear, removed itself from the skid-skewer. The Cobra, also none the worse for the wear, took to the skies again, this time unencumbered. The ground officer went back to his cubicle, shaking his head, saying, "Those wild and crazy guys."

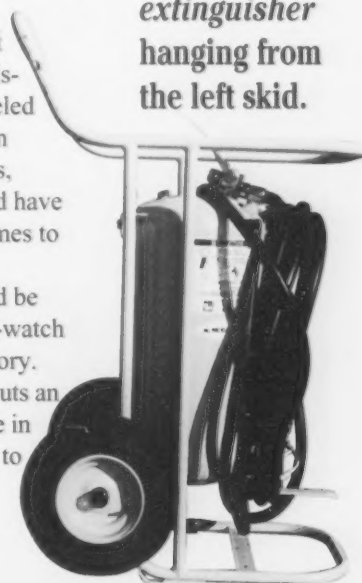
The schedule was good as written. The maintenance department should have had a plane captain at the launch. The captain, hearing that there wouldn't be a plane captain, should have insisted on one, or he should have canceled the hop. The XO should have gotten his minimums earlier. Both aviators, sensing an unusual situation, should have walked around the aircraft a few times to clear the area of obstacles.

The unsung fiscal officer should be designated a fully qualified wheels-watch officer. He is the true hero of the story.

Sure, it's funny until someone puts an eye out. I can't imagine what I'll see in the future to top this one; it'll have to be spectacular! 

Maj. DeHart continues to be a regular contributor to *Approach* and flies with MAG-42.

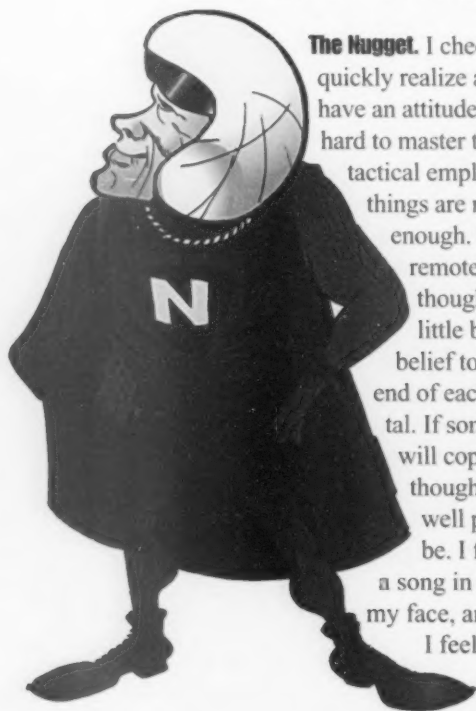
...he felt sure this particular crew didn't really want to fly this particular evening with a 250-pound fire extinguisher hanging from the left skid.



No, I Don't Sing T

by LCdr. Rich Finnegan

AS I WRITE THIS ARTICLE, I am transiting the Atlantic for what will be my fourth flying deployment. My logbook reflects the recent completion of more than 3,000 mishap-free hours. It's clear this accomplishment is not entirely of my own doing. Much of the credit goes to conscientious leaders. I thought I would reflect on my development as an aviator in hopes that someone out there may be convinced to skip over or at least accelerate his progress through some of the more hazardous stages. What follows is an examination of my attitudes at various stages of my career.



The Nugget. I check into the FRS and quickly realize all the instructors have an attitude problem. I study hard to master the airframe and its tactical employment. I feel that things are not going fast enough. Safety is not even a remote concern, even though I have to recite a little blurb professing my belief to the contrary at the end of each brief. I am immortal. If something happens, I will cope with it, even though I might not be as well prepared as I should be. I fly into the night with a song in my heart, a smile on my face, and an empty head. I feel I am a good wingman; I question nothing.

To do so would most certainly earn me an undignified callsign such as, "Blob," "Squeaky," or "Puddles." Buried in my subconscious are colloquialisms like, "Stay up, shut up, or blow up," "Big sky, little bullet," "It's better to die than look bad," or "I just fly 'em; I don't fix 'em." And everyone's favorite, "If they wanted you to memorize that limitation, why did they put the little colored tapes on the gauge?"

I am compelled to say only three things: "Two, bingo," "Mayday," and, "Lead, you're on fire."

All other communications are superfluous and only serve to make me look confused or unprofessional. I always have to win ACM training engagements. My ordinance must always be on target on the first run, even if it means a little head-down CB troubleshooting at a critical time. Debriefs are always useful because they give us all a chance to sit down and carefully review other people's mistakes.

I don't wear my dry suit over the North Pacific because it's uncomfortable, and no one checks, anyway. I know the rules, and I am unconsciously learning how to get around the wording if not the intent. Everyone knows that regulations are issued by the chain of command only to suck the fun out of flying.

I enthusiastically add up my flight hours daily. I fly cross-countries and take maximum advantage of the recreational opportunities at my carefully chosen RON sites. I feel I am a better aviator than most and at least as good as the rest. I am too arrogant – or ignorant – to recognize close calls.

at Song Anymore



The Fleet Lieutenant.

I begin to realize I am not immortal. Nothing will go wrong during the flight, but maybe I should prepare a little more thoroughly.

I read and absorb ideas from safety magazines, and I revisit the wonders of instrument-flight proficiency. I am a section leader. I give other people check-rides. I study harder so I don't embarrass myself. I know the rules and occasionally exercise my knowledge of their exact wording to my advantage.

I keep hearing stories about flight-school contemporaries who have died in mishaps. I'm mildly concerned and disturbed by the similarity of the circumstances in these mishaps to my own experiences.

I now wear a dry suit when ordered to do so, along with most of the rest of my flight gear. I make allowances for the capabilities of others, although I feel (incorrectly) that I have no limitations. I sometimes feel the need to justify an overly aggressive attitude through misuse of the quote, "We fight like we train."

The Grey-Haired Guy. It's now almost a certainty that something will go wrong during any flight. However, I will have a backup plan, and a backup for the backup. I have learned the value of risk management, and I work to stack the odds in my favor. I have learned to understand and abide by the intent as well as the

letter of the law. I'm even more confident in my ability to get out of a hole, but I don't jump in if I can fill it in, first.

I am frustrated when I read about mishaps so similar to the ones I read 10 years ago. I don't accept breaches of flight discipline. I strive to help others avoid my past errors. I feel extremely disappointed when I read or hear the 1980s' adage, "the cost of doing business," and look forward to the day when community planning documents won't have a planned-attrition factor. I strive to consistently accomplish the mission, but I include as a measure of success the professional attention to detail with which we planned and conducted the flight.

Perhaps a few readers may feel that my article reflects attitudes and practices from a bygone era. I believe – based on the continued occurrences of preventable mishaps – that this supposedly bygone era is still with us.

If you are a leader, check the attitudes of the JOs in your flight and channel their enthusiasm in the right direction, like someone did for me. You may be the only one around with the experience to see all the links in the safety chain. As Clint Eastwood said – yeah, I know we use this quote a lot these days – "A man's got to know his limitations."

LCdr. Finnegan flies with HSL-42.



Drawings by
Robert Trotter.

Just Call Me

by LCdr. John G. Spear

A GOOD-DEAL HOP, no question about it, my BN and I thought as we preflighted our A-6E. With the skies clear and a million, flying DACM and a tanker flight with friends from a foreign country seemed like a great way to spend a detachment away from the ship.

Unfortunately, we were working a little behind schedule, and this was one sortie for which we didn't want to be late. We had to hustle. Our ground crew hustled as well, blending blades on the port engine and servicing the aircraft with proper fluids. A quick set of point checks followed by final checks, and we were taxiing for take-off. Rolling down the runway, everything was fine.

Moments later, we were battling the skies above the desert against two Jaguar pilots, both of whom were aggressive and unrelenting. Three engagements later, we called, "Knock it off," and set up our orbit for tanking practice. While one aircraft plugged, the wingman flew close aboard the

port side awaiting his turn. Twenty minutes later, with refueling complete, we dove for the deck for a quick low-level back to base.

Suddenly, at 450 KIAS and 500 feet off the ground, something went "Boom!" I immediately climbed away from the ground and scanned my instruments.

"That's good, nothing wrong with my engines," I thought as I looked outside. Just then, my eyes fixed on the port inboard slat... or what used to be my inboard slat.

The innermost three feet were missing, torn off in the slipstream. I stared at the red paint as I described the scene to my BN. I slowed to gear speed because we were 10 miles from the field, and my BN broke open the PCL. We accomplished all requisite steps. We decided to make a no-flap, no-slat approach, which required a longer rollout. The runway was 10,000 feet long, so there was no problem.

Lateral controllability was solid on the approach as we quietly thanked Grumman for over-engineering our aircraft. After an

The port inboard slat and pylon were damaged.

“Slatzoff!”

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uneventful touchdown and rollout, I wondered why the slat had failed.

“Must have been one mean crack,” I thought. I was wrong.

As I turned the aircraft toward the line, the director’s eyes got very big, and he motioned to the left side of the aircraft.

“Yeah, my slat fell off,” I hand-signalled back.

Climbing down the boarding ladder, I instantly detected that something else was wrong with our mighty dump truck of death: the bottom three-fourths of the port engine-bay door was gone! The port engine-bay door, with its armor plating, had ripped off in the slipstream. It struck the inboard slat, shearing the innermost three feet completely away. It had also punctured the main-gear door, top inboard flaperon, and outboard pylon. The inboard pylon was also crushed, and fortunately for my BN and me, a couple of hydraulic lines had been spared by an inch or two. If those had been severed, the flight could have been dicey.

Analysis of the launch sequence revealed a couple of mistakes made in the heat of battle. In his haste to button up the engine-bay doors, the troubleshooter had omitted the tactile (touch) check in addition to the visual check. The engine-bay door latches looked secured but weren’t.

The final checker – also in a hurry – did not find the problem, either. Once airborne, the pilots who formed up on the port side never mentioned anything unusual. But all it took was a little dynamic pressure and some light chop down low, and everything abruptly changed.

In retrospect, is a couple of seconds or even a minute lost on takeoff a big deal? Given the damage, the investigation, the paperwork, and the many man-hours to repair the jet, no way!

LCdr. Spear was with VA-95 at the time of this incident.

The culprit was the port engine-bay door, which was torn off in flight.



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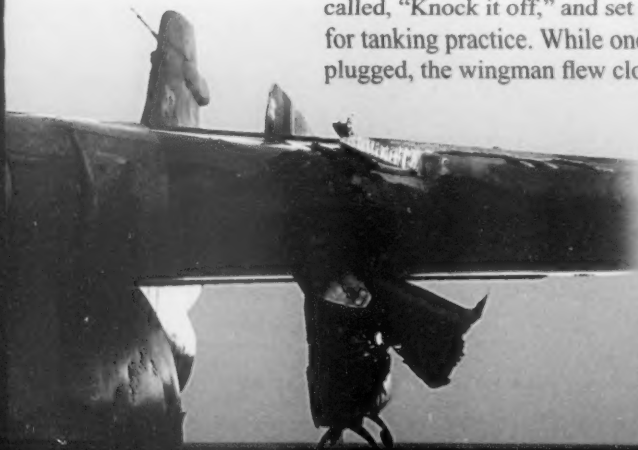
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Night

Photo composition by John W. Williams

by LCdr. Ken Ireland and LCdr. Jim Bounds

Having returned from a harrowing night DLQ on board a frigate, we two HACs discussed the events of the evening.

The short version went like this: It was really stupid to have kept pressing in that weather. What made the situation worse was that neither of us knew what was happening to the other aircraft in the pattern. This divergence in perspective nearly led to a convergence of our aircraft.

We launched with a full load of pilots in two SH-2Gs. The flight brief was thorough, and all members of the crew understood the priorities for the evening's events. The weather would be a factor with scattered rainshowers and a ceiling at 1,500 feet, but it was well above the required SOP mins for these quals. A carrier was operating in the area, so we all agreed to be vigilant in our search for the fast movers. As we flew to the op area, the "scattered" showers appeared to be everywhere, with visibility in the showers

less than half a mile. Adding to the tension, FACSAC couldn't find the carrier. We were concerned because of the likelihood of jets scooting through the area at low altitude, unaware we were sharing their airspace this rainy Saturday afternoon.

We finally located the FFG about 20 miles farther out to sea than stated in the pre-ex. The event started off slowly, with the ship working out the usual communications problems and getting the deck crew ready for bounces. The ship had just finished an extended yard period, and the rustiness of the deck crew was evident. Day bounces proceeded slowly. We were only able to qualify two pilots in each aircraft because of the delays caused by the weather and the inexperienced flight-deck crew. Every half hour the ship entered a rainshower, forcing the helos to navigate around the weather and wait for the ship to come out the other side of the storm.

of Confusion

The real fun started as night approached. Based on the deteriorating weather and the fact that some of the ship's lights weren't working, the two aircraft commanders decided to qualify only the two pilots who were needed to support an upcoming detachment. Both aircraft still had enough fuel to complete "pinkies" and get off the deck in time to return with bingo fuel. The pinkies proceeded uneventfully; each crew dodged the showers. The situation worsened quickly at this point. Here is the story from the perspective of each of the HACs.

Dash 1: I landed to refuel and pick up the remaining pilots for the return trip to the NAS. I selected the pilot who had been ached out of the DLQ as my return copilot, giving him a chance to log some valuable night instrument time. During the refueling process, the ship's helicopter-control officer (HCO) turned on the yellow overhead flood lights to help the deck crew, and I immediately requested that he secure the floods because they were ruining the crew's night vision. The ship complied. The usual 15-minute hot-seat-hot-fuel process took more than 40 minutes.

Dash 2: The 40-minute hot refuel of my playmate had completely eroded my bingo reserve. I was faced with returning to the air station we had departed from or waiting just a little longer and using the second NAS, which was 15 miles closer, as my bingo. I elected to wait to pick up the remaining pilots from the ship. I told Dash 1 while he refueled, letting him know that my margin was slipping away.

Dash 1: There was a sense of urgency to clear the flight deck as Dash 2's fuel state was approaching bingo.

My wingman called, "Dash Two, half mile final, right seat, with gear, for hot-fuel and crew pickup."

I made a normal, night, no-horizon takeoff to port, and encountered IMC at 300 feet AGL in rainshowers.

Dash 2: I let my copilot, who had just completed his first night landings in two years, fly the approach and landing. After some difficulty maintaining lineup and altitude on final, we made our way over the deck with enough forward motion to cause the HCO to actuate the waveoff lights without a radio call. The red waveoff lights, still set on day intensity, were positioned at eye level for a helicopter hovering over the deck of the FFG. My copilot and I were temporarily blinded. It was the first time in 14 years of LAMPS flying I had ever seen waveoff lights at night. I tried to get on the controls and radio the HCO with some strong guidance for the tower to secure the lights. I wanted to reposition, maintain a visual on the deck and land the aircraft myself. My copilot had initiated a waveoff to port. However, based upon his having control of the aircraft and my loss of

As we flew to the op area, the "scattered" showers appeared to be everywhere, with visibility in the showers less than half a mile. Adding to the tension, FACSFAC couldn't find the carrier.

situational awareness from being blinded by the waveoff lights, I decided to go with the departure and complete another approach.

Dash 1: Then I heard, "Tower, turn down the lights!" on the land-launch frequency. I recognized the voice of the HAC in Dash 2. Both my copilot and I assumed the HCO had illuminated the flight-deck floodlights again for Dash 2's hot-refuel. Then I saw flashing caution lights and a fire light, with no secondaries. The compass card also began fluctuating up to 30 degrees (we are talking major gremlins in the cockpit). I suspected water intrusion and became unsure of my navigation equipment's status.

Wanting to remain VMC, I descended and turned back toward the ship, trying to see it and Dash 2 refueling on deck.

Dash 2: I was task-saturated ensuring that our climb was safe, that we were clear of the ship's superstructure and that we were

The two aircraft – Dash 1 entering a port delta and Dash 2 climbing – passed within approximately 200 feet of each other. The HAC in Dash 2 never saw Dash 1 and didn't know how close he had come to a midair until the postflight debrief.

Dash 2 completed a short pattern and began final for the ship, this time with the HAC at the controls. As the Seasprites approached one-quarter mile, the ship entered a downpour and visibility dropped dramatically. The HAC landed, waited out the storm, refueled, picked up the remaining pilots and returned to the beach, where he had to shoot a PAR to 100 feet above minimums to break out.


There are many lessons learned from this flight. First, if you can't maintain VMC in a DLQ pattern, knock it off and go home, even if you leave your shipmates stranded on the boat.

I saw flashing caution lights and a fire light, with no secondaries. The compass card also began fluctuating up to 30 degrees...

climbing on airspeed to our downwind turn altitude. The only radio call I had made during this entire time was an admonition to turn off the lights. I never mentioned a waveoff, nor did the HCO.

Dash 1: I headed toward a port delta in and out of the rainshowers just below the cloud deck, now down at 400 feet, waiting for Dash 2 to embark the remaining pilots and depart for the beach. I continued troubleshooting my navigation problems as we proceeded toward the ship. While looking for the ship I saw Dash 2's blinking anti-collision lights pass directly in front of us, at which time I took evasive action to avoid a midair.

Second, while "communicate" comes after "aviate" and "navigate," during single aircraft operations, when there are multiple aircraft in the pattern, you need to communicate your intentions clearly. The HCO must also communicate over the radios when ordering a waveoff.

Finally, as nightfall approaches in the DLQ pattern, check all the lights on the deck – not just the lineup, drop lights and SGSI – for proper operation and correct intensity. 

LCdr. Ireland was the OinC for HSL-94. He is now assigned to COMNAVAIRPAC. LCdr. Bounds is the squadron's safety officer.

Dealing With the Media Frenzy by Peter Mersky

AFTER 11 MONTHS of what ended up as the second-best year yet – a senior Navy PAO noted, “This is one of our safest flying years on record...” – U.S. military aviation was shaken by a series of seven Class A mishaps that destroyed seven expensive aircraft and killed some 40 aviators, crewmen and passengers. Three of these mishaps involved Navy and Marine Corps tactical jets, with the loss of four of the five aircrew members.

The resulting media coverage was alarmist at best. You couldn’t turn on a CNN newscast for a week without seeing a replay of the disintegration of an Air Force F-117 and its pilot’s ejection. Two weeks later, the loss of an F-14 generated a similar retrospective of the Coast Guard rescue of the RIO. Mercifully, there were no tapes of the Navy and Marine Corps FA-18 losses. But the media fed everything available into its display equation and rolled the films for all they were worth.

Would the interest have been so intense if the seven mishaps had been spaced out over a longer period? It’s doubtful. Nevertheless, a month does not a trend make. And try as they might, no one could find a common thread to these mishaps. The F-117’s wingtip vibrated and flopped around as the Nighthawk disintegrated and its pilot finally bailed out. The single-seat Hornet in Oman was on a low-level, and the two-seater was on a night training flight from Cherry Point. Initial indications in these two losses do point to controlled flight into terrain (CFIT). The F-14, with two experienced aviators in the seats, was also on a training hop. Other service losses were on training flights, too, but hell, if the flight is not a ferry cross-country, actual combat or mission-related, it’s *always* a training flight. We train constantly, whether it’s dropping bombs or hitting the boat during CQ.

Television anchors wonder on the air, “Seven losses in two weeks – what does this mean?” They go to the Pentagon for a conversation with Admiral X or Captain Y. “Tell us, sir, why are so many planes falling out of the sky? Why are we losing so many pilots?”

“We haven’t determined the causes at this time,” the officer responds, accurately. Mishap investigations usually take several months to complete. Yet TV reporters sometimes try to get the senior serviceman to make a statement that will be sensational news. When available, the understandably distraught and resentful family member who agrees to go on camera to castigate the service – doesn’t matter which one – usually muddies the water.

As we here at the Naval Safety Center fielded calls for information from CHINFO and reporters, it struck me how important it was to differentiate between what the media was telling the public and what we knew to be the truth. Not that the television and newspapers were reporting falsehoods, but as in many such instances, the isolated bits of information could only be taken out of context, and the relatively uninformed public was getting a distorted idea of what was happening.

What was happening was one of those odd spikes in the mishap rate that occur from time to time. It isn’t acceptable, but it isn’t a disaster, either. In much the same way, a long stretch without a mishap doesn’t mean we’re never going to have another one. And, in the end, we had the second-lowest Navy/Marine Corps mishap rate ever.



PH1 David M. Titton



PHAN Neil H.F. Sheinbaum



PH3 Timothy C. Ward



PH2 Lisa Kine

*Flying with a
cold is poor*



Headwork.



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